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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,146	08/27/2003	Messay Amerga	020670	7089
23696	7590	06/12/2006	EXAMINER	
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			RIVERO, ALEJANDRO	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/650,146	Applicant(s) AMERGA ET AL.	
	Examiner Alejandro Rivero	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- * Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: METHOD OF SEARCHING INTRA-FREQUENCY, INTER-FREQUENCY AND INTER-RADIO ACCESS TECHNOLOGY (INTER-RAT) WITHIN A FIXED TIME DURATION FOR BASE STATION SELECTION.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains the phrase "are disclosed" (in lines 1-2), which can be implied. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities:

In line 15 of paragraph [0160], the examiner respectfully suggests replacing " _____ " with "10/317,385". Appropriate correction is required.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **104**. The drawings are also objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **104a, 104b, 104c, 106a and 106b**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 18 lacks a proper preamble and does

not produce a tangible result. See section 2100 of MPEP for proper form of statutory computer media claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4, 7-12, 14-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Chheda et al. (US 5,946,621).

Consider claim 1, Chheda et al. disclose an apparatus, comprising: a searcher for detecting a plurality of cells to form a ranked list of monitored cells (Column 2 lines 25-28 and column 3 line 66-column 4 line 5); searching each cell (pilot, base station) from a first list of cells during each of a series of cycles (Column 3 lines 3-14, where Chheda et al. disclose searching the active set); and searching each cell from a subset of a second list of cells during each of the series of cycles where the second list of cells comprising the remaining cells from the ranked list of monitored cells not selected in the first list of cells (Column 3 lines 3-14, where Chheda et al. disclose searching the remaining set); and a processor for ranking the list of monitored cells to form a ranked list of monitored cells and select the first list of cells from the ranked list of monitored cells and the subset of the second list of cells (Column 5 lines 3-28, column 12 lines 41-44, where Chheda et al. inherently disclose a processor since a processing device is needed to calculate rank); and the selected subset varying during each cycle (Column 4 line 59-

column 5 line 52, where Chheda et al. disclose continuously updating the active list, hence the remaining list will also reflect changes).

Consider claim 4, Chheda et al. disclose a method of monitoring neighbor cells, comprising: detecting a plurality of cells to form and rank the list of monitored cells to form a ranked list of monitored cells (Column 2 lines 25-28 and column 3 line 66-column 4 line 5); searching each cell from a first list of cells selected from the ranked list of monitored cells during each of a series of cycles (Column 3 lines 3-14, where Chheda et al. disclose searching the active set); and searching each cell from a subset selected from a second list of cells during each of the series of cycles (Column 3 lines 3-14, where Chheda et al. disclose searching the remaining set), the second list of cells comprising the remaining cells from the ranked list of monitored cells not selected in the first list of cells (Column 3 lines 3-14), and the selected subset varying during each cycle (Column 4 line 59-column 5 line 52, where Chheda et al. disclose continuously updating the active list, hence the remaining list will also reflect changes).

Consider claim 7, Chheda et al. disclose all the limitations as applied to claim 4 above and also disclose wherein each subset selected from the second list is selected in round-robin (examiner interprets the term round-robin to mean that all subsets are selected) fashion (Column 2 line 49-column 3 line 14, where Chheda et al. disclose searching (selecting) the neighbor/active/candidate/remaining sets).

Consider claim 8, Chheda et al. disclose all the limitations as applied to claim 4 above and also disclose wherein the cells are ranked in decreasing order of measured

signal strength (Column 2 line 49-column 3 line 2, where Chheda et al. disclose assigning base stations to sets according to the measured pilot strength).

Consider claim 9, Chheda et al. disclose all the limitations as applied to claim 4 above and also disclose wherein the detecting step is repeated with a minimum frequency according to one or more pre-determined refresh (updating) parameters (Column 4 line 59-column 5 line 2, where Chheda et al. disclose updating at least during handoff).

Consider claim 10, Chheda et al. disclose all the limitations as applied to claim 9 above and also disclose wherein the detecting step comprises one or more search types (Column 1 line 43-column 2 line 5, where Chheda et al. disclose different types of handoff).

Consider claims 11, 12, 15 and 16, Chheda et al. disclose all the limitations as applied to claims 4 and 10 above and also disclose wherein the detecting step comprises intra-frequency and inter-frequency cell searching (Column 1 lines 23-42, where Chheda et al. disclose performing handoff in TDMA (different frequencies, hence inter-frequency) and performing handoff in CDMA (same-frequency, hence intra-frequency)).

Consider claim 14, Chheda et al. disclose all the limitations as applied to claim 10 above and also disclose wherein the one or more refresh parameters are associated with the one or more search types (Column 1 line 43-column 2 line 5, column 4 line 59-column 5 line 2, where Chheda et al. disclose updating at least during handoff and different types of handoff).

Consider claim 18, Chheda et al. disclose a processor readable media operable to perform the following steps: detecting a plurality of cells to form a list and rank the list of monitored cells to form a ranked list of monitored cells (Column 2 lines 25-28 and column 3 line 66-column 4 line 5); searching each cell from a first list of cells selected from the ranked list of monitored cells during each of a series of cycles (Column 3 lines 3-14, where Chheda et al. disclose searching the active set); and searching each cell from a subset selected from a second list of cells during each of the series of cycles (Column 3 lines 3-14, where Chheda et al. disclose searching the remaining set), the second list of cells comprising the remaining cells from the ranked list of monitored cells not selected in the first list of cells (Column 3 lines 3-14), and the selected subset varying during each cycle (Column 4 line 59-column 5 line 52, where Chheda et al. disclose continuously updating the active list, hence the remaining list will also reflect changes).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 2, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al. in view of Bomar et al. (US 6,535,738 B1).

Consider claims 2 and 5, Chheda et al. disclose all the limitations as applied to claims 1 and 4 above and also disclose wherein the processor performs ranking, selecting the first list, and selecting the subset of the second list and compares the number of cells in the list of monitored cells to a pre-determined search number (Column 2 line 49-column 3 line 14).

However, Chheda et al. do not disclose wherein the number of cells in the monitored list is greater than the pre-determined search number.

Bomar et al. disclose wherein the number of cells in the monitored list is greater than the pre-determined search number (Column 5 lines 4-18, where Bomar et al. disclose comparing the number of base stations in the active set and expanding the maximum number thereafter, hence a greater number).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to perform ranking, selecting the first list, and selecting the subset of the second list after comparing the number of cells in the list of monitored cells to a pre-determined search number, as taught by Chheda et al., when the number is greater, as taught by Bomar et al. for the purpose of optimizing the active set by reaching the maximum capacity (maximum number of base stations) of the active set (as suggested by Bomar et al. in column 5 lines 4-18 and column 4 lines 55-56 of Chheda et al.).

Consider claims 3 and 6, Chheda et al. as modified by Bomar et al. disclose all the limitations as applied to claims 2 and 5 above and also disclose wherein the processor directs the searcher to search each cell in the list of monitored cells when the number of cells in the monitored list is less than or equal to the pre-determined search number (Column 2 line 49-column 3 line 14 of Chheda et al.).

11. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al. in view of Lescuyer et al. (US 2004/0147262 A1).

Consider claims 13 and 17, Chheda et al. disclose all the limitations as applied to claims 4 and 10 above and also disclose detecting a plurality of cells (Column 2 lines 25-28 and column 3 line 66-column 4 line 5).

However, Chheda et al do not disclose inter-radio access technology cells.

Lescuyer et al. disclose inter-radio access technology cells (Paragraphs [0004]-[0007], [0019]-[0021] and [0037]-[0040]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to detect inter-radio access technology cells, as taught by Lescuyer et al., in the method of Chheda et al. for the purpose of allowing handovers between different systems to coverage, load balancing constraints (as suggested by Lescuyer et al. in paragraphs [0003]-[0007]).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Kumar et al. (US 6,073,021) disclose CDMA soft handoff.

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Black (US 6,134,440) discloses MS assisted handoff.

Souissi (US 2002/0187780 A1) discloses inter-system handoff.

Noerpel et al. (US 2003/0045241 A1) disclose rank-ordered lists in GSM.

Wallstedt et al. (US 6,542,741 B2) disclose establishing neighbor set lists.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alejandro Rivero whose telephone number is (571) 272-2839. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR

Nick Corsaro

NICK CORSARO
PRIMARY EXAMINER